

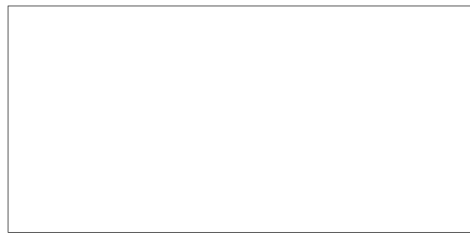
Edie:

→ Speaker should state his / her name, position, component + subject.

→ too dark / light up $\frac{1}{2}$ the room opposite the screen.

→ Nifty mty - "like tries of bar coding" at CD ???

→ At conclusion of each presentation, ask for questions / comments before introducing next speaker.



I would rate the session somewhere between Good / Very Good - thanks for all your efforts !!

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FACILITIES MANAGEMENT DIVISION

ITEM OF INTEREST

AUTOMATIC PNEUMATIC TUBE SYSTEM

The automatic pneumatic tube system in the Headquarters Building was designed specifically for the building and was installed during the construction of the building. The system was designed to permit rapid and secure transmission of paper between stations within the system. In January 1963, the system became operational and by January 1986 over 34 million carriers had been sent through the system. As installed, the automatic tube system in the Headquarters Building is actually zoned into three separate systems. These systems have been designated as "A" system which utilizes amber carriers, "B" system using green carriers and "C" system with red carriers.

In an automatic system, a carrier, the container that holds the material, can be sent from any station in the system to any other station in the system without being touched by anyone except the sender and receiver. The routing of the carrier is determined by the code set on the three movable dial rings located at the top of the carrier. The sender sets the desired station code on the carrier and the carrier completes electrical circuits as it passes through the system to its final destination. To send material to another system, the carrier is sent to a relay station where the material is manually transferred into the other system.

The automatic tube system is a complex and extensive system. Approximately 26 miles of 4-inch steel tubing, through which the carriers travel, extend to all floors except the basement and nearly all corridors in the Headquarters Building. Seven exhausters, ranging in size from 7.5 to 30 horsepower, create the air flow that pulls the carriers through the 4-inch steel tubing at approximately 20 M.P.H. There are four monitors, the heart of the automatic system, where carriers placed in the system, are read, counted, spaced and dispatched to the receive lines. One hundred and forty eight send and receive stations, 100 of which are presently active, are located throughout the building. There are 175 divertors which are used to divert a carrier travelling through a line into a receive terminal or another line. Three hundred and eight valves are used to regulate air flow when carriers pass through the divertors, and 150 brush blocks are used in conjunction with the divertors to read the station code set on the carriers and to activate the divertors. Fifty-six screen boxes and windgates are used to keep foreign matter out of the exhauster impellers (blades) and regulate the air flow in individual lines. Many hundreds of switches, relays, solenoids, rectifiers, diodes and an unknown number of miles of electrical wire are needed to deliver the carriers to their destination.

Although the automatic system, as it exists today, is basically the same system that was activated in 1963, it has undergone many changes over the years. Some of these changes, such as installing master send door lock switches in the monitors, were designed to give better control of traffic flow. The greatest change has been in the location of the send and receive stations. Because the building population is constantly shifting, components utilizing the system are sometimes moved into an area not serviced by the system. Invariably, this results in a request to extend tube service into the new area. Although not always feasible, whenever possible service has been extended into the new area. This has resulted in the installation of twenty five new stations, the relocation of 24 existing stations and the removal of 18 stations. The changes in the system may accelerate over the next few years as components are moved into the New Headquarters Building. Although there are no plans, at this time, to install a pneumatic tube system in the New Building, it will probably be only a matter of time before some components in the New Building discover a need to be integrated into the existing system.